



About
DesireSwap

November 2021

Introduction

DesireSwap is a set of smart contracts that implement *Automated Market Maker* (AMM). Together with a front-end web application, it allows users to easily exchange their cryptocurrencies directly on the blockchain. Such (Decentralized) exchanges are already well known and commonly used in blockchain communities. Most known examples of such exchanges are Uniswap, Balancer, Curve, which white papers and guides we highly recommend to get acquainted with. There are many similar solutions largely based on these swaps such as QuickSwap on Polygon Network or PancakeSwap on BSC Network which are a forks of UniswapV2 and which are vastly used because of small transaction fees on Polygon and BSC Networks.

Recently the concentrated liquidity (CL) innovation was introduced and released by Uniswap(V3). This innovation allows liquidity providers to use their capital up to 4000 times more efficiently ¹. That results in the more stable price of tokens due to smaller price impact and allows introduction of smaller swap fees while increasing liquidity providers gains compared to traditional swap. This is a win-win situation for both liquidity provider and users who perform swaps. The first ones yield higher incomes and the next ones swap with smaller price impact and smaller swap fees. Unfortunately, UniswapV3 was released only on Ethereum, Arbitrum, and Optimism networks where transaction fees are ten to thousands more expensive than on Polygon, Fantom or BSC Network.

DesireSwap's main focus is to give users the possibility of taking benefits from both concentrated liquidity innovation and the smallest transaction cost. That is why we decided to implement the concentrated liquidity AMM from scratch and launch it on the network with small transaction fees (Polygon, Fantom, BSC). We believe that the above two features will make our swap the most efficient one which will bring the most liquidity and volume. Unlike UniswapV3, we implemented auto-compounding swap fees which increases liquidity providers' APY even more. Moreover, we plan to cooperate with arbitragist that use DEX and CEX to generate income. We intend to achieve this by introducing an allowlist of contracts that can interact with our swap. An arbitragists can be added to allowlist if they agree to share 50% of their income.

What distinguishes DesireSwap

- The 1st ever concentrated Liquidity AMM with **auto-compounding fees**.
- The 1st ever concentrated Liquidity AMM on network with **transaction cost counted in cents or less**.
- The innovative incentive program for liquidity providers (see *Desire ERC20 Token*)
- Cooperation with arbitragist

¹check UniswapV3 whitepaper

Desire ERC20 TOKEN

As the vast majority of swaps, DesireSwap protocol is going to have own ERC20 burnable and upgradable token called **Desire** (DSIRE) that will give right to part of protocol (see dividends section) fees and will give governance right to adjust parameters of DesireSwap. The Token is designed in such a way that its value should constantly grow over time. Some points of **Desire** Tokenomics are:

- **Desire** token has not a maximum supply. However, the higher total amount of **Desires** is, the harder it is to create new **Desires**.
- 30 millions of **Desire** are created at token creation and distributed as follows:
 - 20million is given to **Desire** team members
 - 10million is going to be ICO (details in ICO section) at price $\geq 0.1\text{USDC}$
- **Desire** Tokens are minted by Reward-contract as reward for liquidity providers (details in *Rewards and **Desire** Minting* section)
- **Desire** Tokens can be burned to collect profit generated by swap. The token is going to increase in value as the amount of protocol fees accumulates.

Notice that **Desire** is an upgradable contract and new methods to mint it can be added. This can be achieved only by on-chain voting. This is why a large amount of **Desire** is distributed to the team so the team controls the direction of the project at the beginning. Assuming volume of order 100million\$/day it will take around 3 months to mint additional 10 millions of **Desire**. After that team will have less then 50% of **Desire** tokens and community will have power to influence project direction by snapshot votings.

Rewards and Desire Minting

We implement a new reward system. Rewards are distributed proportionally to fees generated instead of liquidity provider and not by the amount of liquidity stacked. The rewards are paid when users redeem their liquidity or by claiming rewards function. Every 1\$ of generated protocol fee gives provider $modifier * 1POINTS$ that can be used to Mint **Desire**. The modifier depends on the pool. The amount of points that is needed to mint one **Desire** is:

$$\left(\frac{totalSupply}{30millions} \right)^2$$

Notice that **Desire** is an upgradable contract and new mechanisms of minting can be implemented and added in future.

Dividends and desire burning

The part of protocol fees is exchanged into ETH and USDC (other coins can be added later) that is sent to the **Desire** Treasury contract. Every **Desire** holders can burn their **Desire** for part of ETH and USDC that was accumulated. Exactly for x **Desires** burned one will receive:

$$\frac{ETHStored * x}{totalDSIRESupply} ETH + \frac{USDCStored * x}{totalDSIRESupply} USDC$$

Details

Protocol Fee – 20% of all swap fees will be intended to generate income for **Desire** Token holders and provide the DesireSwap team resources to develop and promote the platform. In the beginning the protocol fee will be distributed in 50/50 ratio to team and **Desire** Treasury. Later this ratio may be voted by **Desire** holders.

The Upgradability of Desire Token - contracts can be allowed to call **Desire** ERC20 contract mint method. To give to a contract such an ability, the stakeholders have to decide upon it by using an on-chain voting mechanism.

Arbitragist ControlCooperation – arbitragists are constantly performing swaps on CEXes and DEXes. Whenever a price of token changes rapidly on CEX arbitrage bots are performing buying (selling) token on CEX and selling (buying) it on DEX. In this way they generate income. We believe that liquidity providers should be rewarded for creating an arbitrage situation. Most of arbitragist are calling swap methods using their own smart contracts as it gives them advantage over their competition. We are going to ban smart contracts from swapping on our pools except contracts that are allowlisted. In this way we will force arbitragist to cooperate with us and share their income. The income will be spread in the same way as protocol fees.

State of work and release plan

Currently the smart contracts are ready with minor improvements on the way. Small changes can happen to make communication with our front-end app easier. We are reusing UniswapV3 interface and we plan to finish all work in late November and launch DesireSwapV0 in December. The V0 version will contain 8 pools.5 with (200 more efficient capital) 0.05% fee WETH-NATIVE, NATIVE-USDC(BUSD), USDC(BUSD)-WETH, WETH-WBTC, WBTC-USDC(BUSD) and 3 with 0.04% fee USDC(BUSD)-USDT, USDT-DAI, DAI-USDC(BUSD) (40000 efficient capital). We think that these pools are most important as the first ones generate most volume on Quickswap and PancakeSwap and the next ones

will bring the smallest fees to swap stable coins on Polygon and BSC even smaller than base fees on CEXes. After the release of the V0 version, we are planning to pre-sale the **Desire** Token. Notice that some value will be already stored in the Treasure Contract and is intended to be redeemed by burning **Desire**. Then we will proceed with DesireSwapV1 that will allow anyone to create pools of any two ERC20.